

Notice of Allowability

Application No.

10/780,416

Examiner

Jack Chen

Applicant(s)

HSU, HSIU-WEN

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.

2. ☒ The allowed claim(s) is/are 1-25 and 27-32.

3. ☒ The drawings filed on 17 February 2004 are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 4/15/04

4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 5/28/04

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____

Jack Chen
Primary Examiner
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DETAILED ACTION

In response to the communication filed on February 17, 2004, claims 1-32 are active in this application.

Information Disclosure Statement

The information disclosure statement filed on April 15, 2004 has been considered.

Oath/Declaration

Oath/Declaration filed on February 17, 2004 has been considered.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stephen G. Stanton on May 28, 2004.

The application has been amended as follows:

Replaced the Abstract with "The present invention relates generally to semiconductor fabrication and more specifically to simultaneous formation of capacitors, resistors and metal oxide semiconductor."

Re claim 1, line 22, insert —simultaneously—after "to".

Re claim 5, line 3, insert —oxide—after "interpoly".

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Re claim 6, line 3, insert ~~—oxide—~~after “interpoly”.

Re claim 12, line 22, insert ~~—simultaneously—~~after “to”.

Re claim 15, line 3, insert ~~—oxide—~~after “interpoly”.

Re claim 16, line 3, insert ~~—oxide—~~after “interpoly”.

Re claim 22, line 24, insert ~~—simultaneously—~~after “to”.

Cancel claim 26.

Re claim 27, line 3, insert ~~—oxide—~~after “interpoly”.

Reasons For Allowance

2. Claims 1-25, 27-32 are allowable over the prior art of record.
3. The following is an examiner's statement of reasons for allowance: the prior art of record neither teach nor make obvious the claimed limitation of the instant application as a whole as recited in claims 1, 12 and 22 respectively. In particular, the prior art does not teach or suggest the particular subset of the process steps for simultaneously forming at least one capacitor, at least two resistors and at least one metal-oxide semiconductor by patterning the doped second polysilicon layer and the doped first polysilicon layer to simultaneously form: within the capacitor region: a lower capacitor doped first polysilicon portion underneath at least a portion of the capacitor interpoly oxide film portion, and an overlying upper capacitor second doped polysilicon portion over at least a portion of the patterned capacitor interpoly oxide film portion; within the first resistor region: a lower first resistor first polysilicon portion and an upper, overlying first resistor second polysilicon portion; within the second resistor region: a lower second resistor first polysilicon portion underneath at least a portion of the second interpoly

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oxide film portion; and within the metal-oxide semiconductor region: a lower metal-oxide semiconductor first polysilicon portion and an overlying metal-oxide semiconductor second polysilicon portion.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

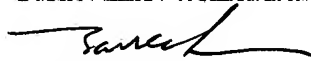
Takeshita discloses the similar method for forming the devices; however, this reference at least fails to show the above cited limitations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jack Chen whose telephone number is (571)272-1689. The examiner can normally be reached on Monday-Friday (9:00am-6:30pm) alternate Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W Whitehead can be reached on (571)272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jack Chen
Primary Examiner
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